

AUG 10
NOV 3

Soundings

A Contemporary Score

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Artist: Richard Gareth

Title: Before Me

Year: 2012

Media: Sound Installation

Duration: Indeterminate

Tech: Head amplifier, speaker cabinet, turntable, glass marble, microphone stand, shotgun microphone, and lightbulb.

This work is a sculptural assemblage of outmoded technologies, and the spinning marble amounts to a live performance of sorts. The work's centerpiece is an old LP record player with its platter upside down and revolving at 33 ½ revolutions per minute. The marble at the upturned edge can advance only slightly before its momentum is overridden and it rolls back to its starting point. This action continues endlessly, suggesting the plight of Sisyphus, a king in Greek mythology who was compelled to push a boulder up a mountain only to have it repeatedly fall back to the mountain's base.

Soundings

A Contemporary Score

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Richard Garett. *Before Me*. 2012.
Sound installation, dimensions variable.
Courtesy the artist and Julian Navarro
Projects, New York

SOUNDINGS

From the 1960s to the Present Barbara London

Soundings: A Contemporary Score features recent work by sixteen young artists who work with sound. They come from the United States, Uruguay, Norway, Denmark, England, Scotland, Germany, Australia, Japan, and Taiwan and have a broad understanding of art, architecture, performance, telecommunications, philosophy, and music. As they move comfortably between mediums, listening and hearing remain central to their practices. Their environments, drawings, and assemblages have a palpable sonic presence—even the ones that must be seen to be heard.

Sound as an art medium emerged during the 1960s from the foundations that had been laid for it over the preceding fifty years.¹ In the spirit of counterculture and revolution, artists were experimenting with time-based art that was intangible and difficult to commodify and collect. Their seat-of-the-pants approach to process and materials was well suited to the artist-run, rough-and-ready exhibition spaces sprouting up in cities the world over. Unconstrained by the financial expectations of commercial galleries, these nonprofit establishments allowed artists to experiment and benefit from their successes and failures. In these venues, which were frequented mostly by the artists' peers, viewers became participants and assumed active relationships with the new kinds

of art—site-specific and/or performance-based—then forming.

The distinctions between visual artists and composer-musician-performers blurred as young artists started to thrive in the fertile middle ground between disciplines. La Monte Young, founder in the early 1960s of the Theatre of Eternal Music, was accompanied by Marian Zazeela, Angus MacLise, John Cale, and Tony Conrad in creating legendary environmental installations featuring electronic drone sounds in a loft in downtown Manhattan. Up-and-coming artists such as Rainer Fetting, Martin Kippenberger, Salomé, and Luciano Castelli in Berlin, Throbbing Gristle in London, and Barbara Ess in New York picked up electric guitars and made music with the same three analogue chords that were being strummed by their counterparts in punk rock bands. James Nares, Eric Mitchell, and others on Manhattan's Lower East Side created sound events and collaborated on soundtracks for one another's experimental films. Many artists, following the lead of John Cage and David Tudor, took to fashioning homemade electronic circuits, often for live events.² Others, such as Joan Jonas, Terry Fox, Charlemagne Palestine, Luigi Ontani, and Gilbert & George, used sound as a central component of their performance work.

Not only in New York, but also in cities such as Stockholm, London, Milan, Kobe, and

Melbourne, art centers known as "alternative spaces" were emerging and supporting the evolving sonic arts.³ These organizations, some of them short-lived, welcomed artists visiting from abroad and gave them opportunities to try out new forms. Critics were welcomed as well, to discuss the connections between art, music, and sound.

Alternative spaces jumped in where museums feared to tread. A prime example is the Kitchen, which, since opening in Manhattan's SoHo in the early 1970s (it has since moved to Chelsea), has presented visual art, dance, and experimental music, often in combination. Back then, the term "experimental" was much used and applied to diverse forms of artistic experimentation, from Pierre Schaeffer's *musique concrète* in 1950s France⁴ to works by sound-oriented intermedia artists of the 1960s, including VALIE EXPORT in Vienna, Carolee Schneemann in New York, and Nalini Malani in Bombay.

Significant early milestones signaled sound art's coming of age. René Block, as director of the DAAD in the 1970s, championed sound as an art form by granting residencies in Berlin to a dozen or so practitioners.⁵ Block's colossal 1980 exhibition *Für Augen und Ohren. Von der Spieluhr zum akustischen Environment. Objekte. Installationen. Performances* (For eyes and ears: from the music box to the acoustic environment. Objects,



Laurie Anderson. *O Superman*. 1983. Music video, 8 min. 23 sec. The Museum of Modern Art. Gift of Warner Bros. Records

installations, performances) at the Akademie der Künste in Berlin traced the art form from its glimmerings in automatic instruments of the sixteenth century to Dada and Futurism of the early twentieth century, and also made connections to the Fluxus circle.⁶ By that time, Germano Celant's 1973 exhibition *The Record as Artwork. 1959–73* had identified the LP as a vital, collectable art form.⁷ Change was afoot. Whereas twenty-one sound exhibitions were held in museums worldwide in the 1970s, in the 1980s there were sixty-two.⁸

Artists' engagement with technology opened new possibilities for sound art and expanded its audience. Christina Kubisch mastered techniques of magnetic induction to realize her sound and light installations,⁹ and Bill Viola, Joan Jonas, and Brian Eno finely tuned their respective video

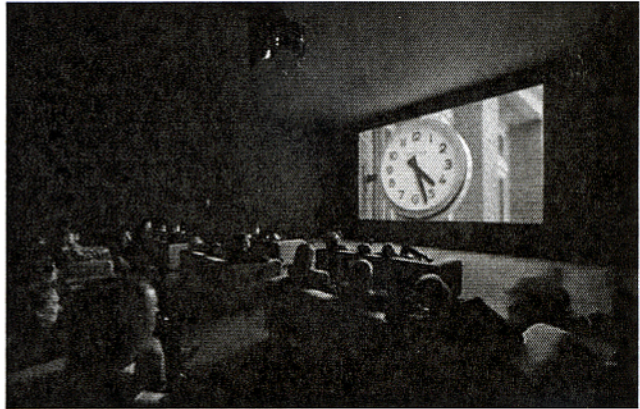
installations by using state-of-the-art loudspeakers that enabled them to place as much emphasis on sound as on image. Laurie Anderson employed vocoders, pillow speakers, harmonizers, and homespun special effects to shift between personas in live performances and in her 1983 music video *O Superman*. Around the same time, turntablist Christian Marclay was working at the intersection of the aural and the visual, sampling and appropriating in the manner of a DJ. In alternative spaces he soloed with patchwork records made of fragments he glued together and played loudly on his phonoguitar. He strutted and pumped up the volume, paying homage to Jimi Hendrix in his 1985 performance *Ghost (I Don't Live Today)*. Twenty years later, desktop video allowed him to compose with sound and visual material simultaneously, and to produce the precise edits and sound transitions that characterize his remarkable recent works *Video Quartet* (2002) and *The Clock* (2010).

Small alternative spaces still thrive largely in the low-rent peripheries of cities, where they continue the cycle of showcasing emerging sonic practices and generating discussion about them.¹⁰ At this topsy-turvy moment of brisk technological change, innovation manifests itself in myriad ways. Young artists with an interest in sound are as likely to study computer programming and music composition as painting, sculpture, and media art. Well versed in technology and in command of their digital productions, they are, like most members of their generation, comfortable watching feature films on smart phone screens and generating their own personalized sound tracks. However, they are much more than mere consumers of images and sounds. They consider the choosing of what they look

at and listen to, and may upload for their friends, as part of the process of deciphering the threads connecting them to a world that is growing more accessible every day. Artists' ever-expanding tool kits now include digital matter that is proliferating "in the cloud."

Today, museums are fully adept at incorporating video and media installations, and by extension, sound art, into their contemporary programming. Many have specialized audio/visual crews on staff to install and maintain collection and exhibition equipment. This expansion of the range of art shown by museums occurred in the early 1990s, when projectors and personal computers became more affordable and user-friendly. As commercial art galleries embraced media art and developed marketing strategies for it, museums hired media conservators to safeguard and preserve it for the future.¹¹ This practical step, along with the burgeoning of interdisciplinary art practices, contributed to what is now a widespread acceptance of time-based media installation as a collectable art form. As media and performance have become the default modes for many artists, sound has moved up through the ranks to be recognized and exhibited as an art form in its own right.

The work brought together in this exhibition reflects the strength of a dynamic and diversified area of contemporary practice. Some of the pieces convey sound visually. They spark in the mind's ear what is sometimes referred to as non-cochlear sound, a seemingly paradoxical term that recalls Marcel Duchamp's notion of non-retinal art.¹² In an exemplary evocation of seen sound, Marco Fusinato has produced five abstract drawings based on an orchestral score. On each



Christian Marclay. *The Clock*. 2010. Single-channel video, 24 hours

page, a straight line connects every individual note to a central spot, creating a focal point of immense weight and intensity. If Fusinato's piece were ever performed, the orchestra would produce the most explosive five notes ever heard.

A more traditional rendering of a score is heard in a work by Susan Philipps. Her installation draws upon a symphony that was composed in a concentration camp in Nazi Germany in 1943. Whereas the original score was written for twenty-four instruments, in the performance orchestrated by Philipps, there are just two, a cello and a viola, playing their intermittent parts in a work now haunted by silences.

Field recording, a branch of sound art also known as acoustic photography and phonography,¹³ is used to capture a sense of space and place, and in doing so, it often reveals that silences are anything but empty. Jacob Kirkegaard's single-channel audio-visual projection depicts, in four sequential segments, four deserted rooms at the abandoned site of Chernobyl, in Ukraine. The sonic atmosphere of each room, punctuated by barely audible sound events—a drip, a creak—was recorded, then played back and re-recorded repeatedly on location. With the addition of

each sonic layer, the recording gained in mass and volume, as if to broadcast the terrifying message of nuclear disaster.

The works of several artists in *Soundings* are based on sound-producing devices that have been altered. Camille Norment removed the interior mechanism from an old-fashioned standing microphone and replaced it with a pulsating light that eerily invokes the shades and voices of celebrated performers of the past. Richard Garett converts a worn-out record player into a stage for another antique—a shiny glass marble. Together, the obsolescent device and vintage child's toy perform a touching drama that gives rise to sounds rarely if ever fully attended to.

Soundings is the realization of a longstanding commitment to bring sound works by artists into the Museum. It began in 1979 with *Sound Art*,



Jacob Kirkegaard. *AION*. 2006. Photograph, Lambda print on dibond, 11 7/8 × 15 3/4" (30 × 40 cm)

an exhibition of works by three artists that was held in a tiny video gallery.¹⁴ Due to the small size of the space, the works were shown one at a time, in rotation, for a couple of weeks each. The impetus for the exhibition came from the artists, who, with their countercultural convictions, were committed to working in a medium that went against the grain. Sonic work then had a candor, a do-it-yourself sense of experimentation. It broke new ground, pushing the capabilities of institutions willing to exhibit it and the sensory thresholds and understanding of audiences who were curious to experience it.

Within contemporary art, the energy of the counterculture has dissipated, and sound is no longer marginalized as a medium. Nevertheless, artists are more than ever drawn to it, perhaps because it is still so full of potential, and not yet quite defined. Today the art of sound questions how and what we hear, and what we make of it.

Luke Fowler and Toshiya Tsunoda

Ridges on the Horizontal Plane. 2011. Sound installation with 16-mm film, slides, piano wire, and projection screen. Collection the artists and Galerie Gisela Capitain, Cologne

Artists with strong individual practices, Luke Fowler and Toshiya Tsunoda both studied visual art and are involved in music production and performance. Fowler is best known for his film portraits of social radicals such as Cornelius Cardew, the avant-garde composer and political activist, and the Scottish psychiatrist R. D. Laing. The mood and form of each of his films reflect the character of the subject. Tsunoda, a widely respected

composer of experimental music, is also acclaimed for his field recordings.

As a duo, Fowler and Tsunoda explore the relationship between seeing and hearing. They first collaborated on *Composition for Flutter Screen*, a film-sound installation commissioned by the 2008 Yokohama Triennial.¹⁵ In this work, images of natural elements including water and fire are seen on a projection screen, across which a taught vibrating wire pulsates. An electric fan aimed at the loose cloth screen causes it to move, bringing it into contact with the resounding wires and distorting the projected images.

Ridges on the Horizontal Plane expands upon the earlier work by adding an element of doubling. Still and moving images are projected onto either side of a cloth projection screen, which is agitated by air currents produced by two oscillating fans. Two amplified piano wires stretch horizontally across either side of the cloth, bisecting the images. The tones made by the vibrating wires change in response to the shifting airflows and intermittent contact with the billowing screen. The moving images, shot in 16-mm film, depict signs of natural and man-made movement. The still images, projected from large-format color slides and in smaller scale, show semitransparent windows and reflective surfaces.

Ridges has roots in structuralist film and in the legacies of expanded cinema. Its unsynchronized audio and visual elements and their seemingly random connections link to the strategies of chance first explored by John Cage and others. The artists see the horizontal division of the screen by the wire as a horizon line framing the landscape of images.

Marco Fusinato

Mass Black Implosion (Shaar, Iannis Xenakis). 2012. Five-part drawing. Collection the artist and Anna Schwartz Gallery, Melbourne

Marco Fusinato explores the rhetoric of radicalism as practiced in the arts and in politics. In art school, he was more interested in ideas than in process and was drawn to the work of the Futurists, Marcel Duchamp, John Cage and artists associated with Fluxus, artists who “crossed over,” as he puts it, between disciplines. He became interested in the searching work of avant-garde composers and pondered the connections between contemporary music and Conceptual art.

Fusinato played guitar as a noise instrument in underground clubs, employing a panoply of electronics in his guitar work to achieve masses of sound comparable to the forceful clusters in the works of Iannis Xenakis. He immersed himself in Xenakis’s writings and recordings and bought one of the composer’s early scores. This document would become the starting point of Fusinato’s *Mass Black Implosion* series, which over the last ten years has come to include works by many other twentieth-century composers.



Marco Fusinato. 2012. Performance at Funhouse, 30th São Paulo Bienal, Brazil. 2012

The exhibited work, *Mass Black Implosion (Shaar, Iannis Xenakis)*, consists of a drawing in five parts based on Xenakis’s *Shaar*, a piece from 1983. Working on reproductions of five pages from the score, Fusinato selected a central point on each sheet to which he drew a straight line from every note on the page. His project proposes a new piece of music in which all the notes are to be played at once. The resulting images strike the eye as violent blasts, great compressions that thunder in the mind’s ear as the music implodes into noise.

Richard Garet

Before Me. 2012. Turntable, microphone, pair of speakers, clear glass marble. Collection the artist and Julian Navarro Projects, New York

Sound is the driving force in Richard Garet’s installations, moving images, and performances. Garet served as a teaching assistant to the painter Larry Poons and later was a student of the artist and composer Maryanne Amacher (see text by Anne Hilde Neset, p. 18) at Bard College. He was captivated by Amacher’s undocumented installations and performances, which were intended to be experienced exclusively at first-hand. From Larry Poons, Garet learned that highly unorthodox ideas could be central to an artist’s work.

Garet’s abstract digital works, which he calls sonic constructions, combine algorithmic and analogue systems and are usually presented as projections or on computer screens. Garet also creates live audiovisual performances, which are closely related to these works, while sitting at a laptop.

Garet’s *Before Me* is a sonic construction with tangible form. The work consists of an



Richard Garet. *Light Motion and Radio Disturbances*. 2011.
Performance at SFMOMA, San Francisco, 2011

old LP record player with an upside-down platter revolving at 33 ½ rpm. A clear glass marble placed at the upturned edge of the platter's smooth metallic surface advances slightly before rolling back to its starting point. This action is repeated again and again, ad infinitum. The scraping sound of glass against metal—the sound of the marble's sisyphian ordeal—is picked up by a microphone and amplified by a speaker standing on the floor. Unlike the maddening stutter of a scratched LP, the sight and sound of the marble's endless to and fro elicit sympathy and wishes for its speedy deliverance.

Florian Hecker
Affordance. 2013.
3-channel electroacoustic sound.
Collection the artist

Florian Hecker studied computational linguistics and psycholinguistics at Ludwig Maximilian University, Munich, before receiving a degree in fine arts at the Akademie der Bildenden Künste in Vienna. He is the creator of electroacoustic performances and sound installations and publishes writings on his own and others' work.

In his installation *Chimerization*, which premiered at Documenta 13 in 2012,

three sound streams could be perceived individually and also together as a unit, in the manner of the chimera of Greek mythology, a monster composed of three distinct animal parts. Based on a libretto by the philosopher Reza Negarestani, the sound streams of *Chimerization* were spoken in English, Farsi, and German by readers whose voices could be heard to merge and separate.

Threefold sound challenges and complicates what Hecker calls our "bifurcated" listening. In *Affordance*, he explores this three-stream idea further. Sounds coming from three speakers are molded to the space of the installation as one would mold a malleable, visible material.

Christine Sun Kim
All Day. 2012.
Ink, pastel, and charcoal on paper, 38 ½ × 50"
Pianoiss . . . ismo (Worse Finish). 2012. Pastel and pencil on paper, 38 ½ × 50"
Feedback Aftermath. 2012.
Ink and charcoal on paper, 38 ½ × 50"
All Night. 2012. Pastel, pencil, and charcoal on paper, 38 ½ × 50".
Collection the artist

Born deaf, Christine Sun Kim explores the materiality

of sound in spirited work that connects sound to drawing, painting, and performance. She created "seismic calligraphy" drawings in 2008 by resting paint-dipped brushes on canvases that were placed horizontally on a pulsating subwoofer. The brushes' movement generated non-cochlear sound paintings. Sun Kim has also worked with piano wires, transducers, helium balloons, her own breath, and the vibrations of outdoor noises. She received a B.A. from Rochester Institute of Technology, an M.F.A. in sound and music from Bard College, and an earlier M.F.A. from the School of Visual Arts. She persistently questions what she calls "the ownership of sound."

In the course of developing her own visual language, Sun Kim has explored and employed notational elements from various information systems. Recently, she produced a series of drawings combining elements of graphic notation, musical notation, American Sign Language Glossing, and American Sign Language (ASL) as a means of expanding what each system is able to communicate and to invent a grammar and structure for her compositions.

The four drawings, selected from hundreds of her pictographic scores and transcripts, depict loosely sketched staves, symbols for loud and soft, hand gestures, and word plays. The works are witty evocations of particularly large sounds.

Jacob Kirkegaard
AION. 2006.
Single-channel sound and video installation.
Collection the artist

Kirkegaard has been recording the sounds around him since the age of six, when he was given a reel-to-reel tape recorder

and a microphone. At nineteen he was introduced to Walter Ruttmann's *Wochenende*, an imageless film of sound from 1930, and the experimental sound compositions of composer/theorist Pierre Schaeffer (see text by Anne Hilde Neset, p. 17). Both bodies of work expanded his horizons and lay the foundations for his artistic practice.

After receiving an M.F.A. from the Academy of Media Arts in Cologne in 2006, he began experimenting with sophisticated recording tools. Today he uses accelerometers, hydrophones, and home-built electromagnetic receivers to capture wondrous dimensions of the world around him. He has recorded the singing sands of the Oman desert, sounds that emanate from the inner ear, and unspoken but audible communications that take place in social interactions.

AION is a sound and video portrait of four spaces inside the exclusion area surrounding the Chernobyl nuclear power plant site, which was evacuated immediately after disaster struck there in 1986. Kirkegaard placed recording equipment in four forsaken spaces—a moldy swimming pool, a rubble-strewn concert hall, a grimy gymnasium, and a quaint church.

He captured the "voices" of these enclosures by setting up a microphone, recording deck and loudspeaker in each location. Then he hit the record button and went away. Returning, he stopped the recording, played it back, and recorded the playback in the same location. The process was repeated several times, so that the eerie quiet of the spaces thickened and was amplified until it became a deep, intensely resonating roar.¹⁶ Kirkegaard matched the visual depictions to his acoustical method, creating multiple layers of

images of each space. The title comes from ancient Greek $\alpha\omega\upsilon$, which means time without end, and to most is beyond belief.

Haroon Mirza

Sick. 2011.

LEDs, amplifier, speakers, video, monitor, strobe, electronic circuits, and gold nugget. Collection Dillon Cohen, New York

Haroon Mirza received an M.A. in fine art from Chelsea College of Art and Design and an M.A. in design and critical practice from Goldsmiths College, both in London. His works are assemblages of electronic gadgets, faders, and controllers that he has tinkered with and used to alter appropriated videotapes, outdated TVs, and old furniture. The glue in his work is sound.

Sick is shiny and black, and it pulsates. It was first seen in 2011 at the 54th Venice Biennale, where Mirza received the Silver Lion Award for most promising young artist. The installation brings together disparate elements. A 9.5-gram lump of pure gold—equivalent in weight to a £1 coin—bounces on top of a small speaker emitting pulsating sounds that resemble those of an electronic drum. On the floor, small blue LEDs flash in unison. Also floor-bound, and half hidden under what looks like an improvised enclosure, a liquid crystal display screen extracted from a television flashes in conjunction with bursts of video images of an angry demonstration outside an upmarket department store in central London. The protesters were condemning tax avoidance by wealthy corporations at a time when the government was cutting back social services. The crowd's vehemence matches Mirza's synchronization of pulsating sound and light.

The word "sick" in the title has in recent years acquired

a slang usage that inverts the word's usual meaning to its opposite: "sick" is "cool." Except that it isn't cool to say what you really mean, and so the inverted meaning doubles back on itself, and "sick" reverts to its conventional meaning. Originally conceived as a soundtrack to David Goldblatt's photographic portraits of South Africans who had been absolved of heinous crimes after confessing them to their country's Truth and Reconciliation Commission, *Sick* stands on its own as an indictment of rapacious commercial interests and their government allies, and it targets everyone within earshot.

Carsten Nicolai

wellenwanne lfo. 2012.

Water tank, water, mirror, audio equipment, stroboscope, display screen. Collection the artist and Galerie EIGEN + ART, Berlin

Carsten Nicolai is a visual artist, musician, architect, and the author, most famously, of *Grid Index*, a seminal work on the mathematics of grids and visual patterns. As a member of the bands Signal (with Frank Bretschneider and Olaf Bender) and Cyclo (with Ryoji Ikeda), he goes by the name of Alva Noto.

For many years Nicolai's visual practice has been shaped by the principles of cymatics, a branch of science concerned with modal phenomena. In 2000 he investigated the relationship between order and disorder in *Milch* (Milk) by pulsing barely audible sound waves into a small pool of milk, thus generating undulating patterns on the milk's surface. The patterns changed according to the frequency of the acoustic signals and were captured in a series of photographs. The images are exacting and reveal the elegance of complex systems.

In *wellenwanne lfo*, low-frequency sound waves transmitted onto the surface of a pool of water create waves of concentric circles that generate interference patterns. The patterns change depending on the sound frequencies that produce them. Reflected by a mirror onto a large display screen, they serve as a scientific visualization of the properties of sound and as a subject of meditation on the principles of order and chaos.

Camille Norment

Triplight. 2008.

Microphone cage, stand, light, electronics. Collection the artist

Camille Norment studied comparative literature and art history at the University of Michigan before receiving an M.F.A. and then an M.A. from the Interactive Telecommunications Program at New York University and participating as a fellow in the Whitney Independent Study Program (ISP). She plays glass harmonica in an ensemble that includes the Norwegian *hardingfele* (Hardanger fiddle) and electric guitar. Her sonic installations create poetic spaces in which visitors are both performers and witnesses.

A standing microphone resembling one that Billie Holiday or Elvis Presley might have used conjures long-ago performers pouring themselves into their songs. Yet the 1955 Shure microphone that Norment adapted for her sculpture *Triplight* stands alone and silent. Its original internal mechanism has been removed, replaced by an erratically flickering light. Illuminated from within, the microphone's grill casts a large, specter-like silhouette over an adjacent wall. The ghostly form resembles a rib cage, and the pulsing light, a heartbeat.

Norment's work often brings to mind the uncanny. Cultural memories are condensed into physical, spatial, and temporal experiences that have the hallucinatory qualities of psychological atmospheres. In *Triplight*, singer and sound are ghosts, but both are present. The listener is the medium that draws out substance from that which is not there.

Tristan Perich

Microtonal Wall. 2011.

1,500 1-bit speakers and microprocessors, aluminum. Collection the artist and bitforms gallery, New York

Tristan Perich studied math, computer science, and music composition as an undergraduate at Columbia University and received an M.A. from the Interactive Telecommunications Program at New York University's Tisch School of the Arts. In 2004 he released *1-Bit Music*, an electronic circuit carefully arranged in a CD case with a headphone jack on its spine. Using rudimentary hand-programmed electronics, he made the forty-minute music composition as a means of investigating the foundations of digital sound.

Math, physics and computer code are the main building blocks and aesthetic inspiration for Perich's music and his installation work. *Microtonal Wall* is equal parts analytical, in its deconstruction of electronic music, and sensorial, in the physical experience it offers. The work consists of 1,500 tiny speakers, each with a 1-bit processor emitting a different microtonal frequency. The speakers are arranged in a grid, with low-pitched sounds on the left graduating to high-pitched on the right, and are mounted on a twenty-five-foot-long panel. What one hears depends upon where one stands

in relation to the piece, which spans four octaves. Up close, distinct tones from individual speakers can be detected; at a short distance from the center, the sounds blend into a uniform mass; and as listeners proceed from one end of the piece to the other, they progress through different tonal fields, each eliciting its own range of psychic and emotional responses.

In the tradition of Minimalism, which in the 1970s pared down form to the bare yet not-so-simple basics, Perich arranged the humblest of digital building blocks to create a contemporary composition of depth and complexity.

Susan Philipsz

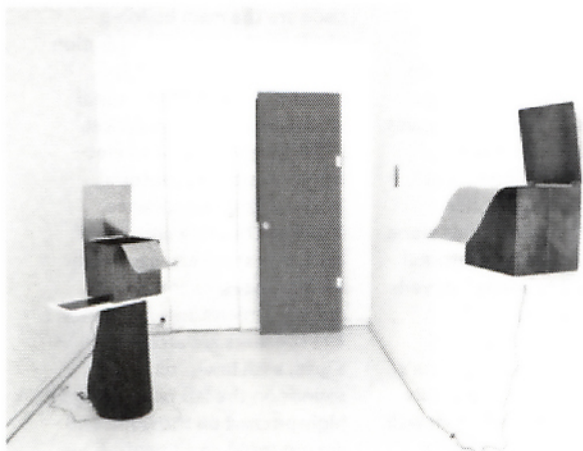
Study for Strings. 2012.
8-channel sound installation.
Collection the artist and
Tanya Bonakdar, New York

After studying sculpture in art school, Susan Philipsz became the only artist to have won Britain's Turner Prize (in 2010) for a work composed of sound alone. She is known for creating evocative sound interventions using recordings of her own a capella singing of traditional folk songs—lullabies and love songs about

sailors gone to sea. Transmitted through public address systems in places such as supermarkets, the undersides of city bridges, and on weekends in deserted financial districts, the songs and their delivery have a jarring and moving intimacy as they address memory and desire.

Study for Strings, which was commissioned by Documenta 13, is based on a twenty-four string orchestral work by Pavel Haas, a student of Czech composer Leoš Janáček. Haas wrote the composition in 1943 while interned at the Theresienstadt concentration camp, and the completed work was performed there, once, by incarcerated musicians. (A film of the performance was used as Nazi propaganda.) Soon after, the composer and many of the musicians were sent to Auschwitz-Birkenau and killed. The conductor, Karel Ancerl, survived and reassembled the orchestral parts after the war.

Philipsz evokes the pathos of the original performance of *Study for Strings* as well as the horror that followed. The entire score is performed by just two musicians, who play only their parts in the orchestral work. It is as if they are engaged in a serious conversation that unfolds slowly, full of pauses,



Sergei Tcherepnin. *Pied Piper, Part 1*. 2012.
Mixed media sound installation. Installation view at Audio Visual Arts, New York, 2012



Stephen Vitiello. *Women's Chorus (Image One)*. 2003.
Field photograph. Watoriki Village, Amazon, Brazil

each waiting politely for the other to complete a thought. The silences resound with absent music and conjure memories of the dead.

Sergei Tcherepnin

Motor-Matter Bench. 2013.
Wood bench with amplifier
and transducers.
Collection the artist and
Murray Guy, New York

Sergei Tcherepnin is a member of the fourth generation of musicians and composers descended from Nikolai Tcherepnin (1873–1945), who studied with Rimsky-Korsakov and conducted Diaghilev's *Ballets Russes*. The young Tcherepnin trained as a composer and wrote instrumental music into his early twenties, when he started delving into electronic music, acoustics, the physiology of the ear, and the ways in which sound can affect the brain. In his studies at Bard College with Maryanne Amacher and the sound engineer Bob Bielecki, he became interested in psychoacoustics and the physicality of sound.

Tcherepnin's performances, compositions, and spatial arrangements, made with the simplest of materials, turn sound into material. His temporary architectural interventions,

in which the sonic and the haptic intertwine, have a droll touch.

Motor-Matter Bench features a vintage New York subway platform bench situated in a busy area of the Museum. Using an analogue synthesizer and onsite recordings, Tcherepnin composed a synthetic version of melodies and rhythms embedded within the space itself. Recharge pulses from transducers mounted on the underside of the bench send the composition, via bone conduction, through the bodies of people seated there. The sound coming from within them is audible to people standing nearby.

Stephen Vitiello

A Bell for Every Minute. 2010.
5-channel sound installation with
aluminum sound map.
Collection the artist

Stephen Vitiello creates sound installations, performs live with electronic instruments, and has composed soundtracks for video artists such as Tony Oursler, Eder Santos, and Jem Cohen. He travels to remote places rich in unusual sounds and on location uses professional as well as homemade recording devices to capture sound that he subsequently integrates into his work.



Hong-Kai Wang. *Music While We Work*. 2011.
Multichannel sound and 2-channel video installation

In 2003, he lived among the Yanomami in Brazil and learned how Yanomami shamans use birdsongs and the sounds of insects to predict future events. The shamans' method, called "heã," of interpreting the voice and language of the forest underlay Vitiello's installation at the Cartier Foundation, *Yanomami: Spirit of the Forest*, in 2003.

When Vitiello became Associate Professor of Kinetic Imaging at Virginia Commonwealth University in 2004, he learned about an old-growth forest where some of the largest cypress and tupelo trees in Virginia still stand. Entering the area by canoe, he paddled along the Nottoway River, where he captured the calls of owls in the forest.

During a six-month residency in 1999, Vitiello occupied a studio on the ninety-first floor of the World Trade Center, where he recorded the creaking noises the building made as it swayed in the wind. Placing contact microphones on the permanently closed windows, he captured sounds of the world outside—the buzz of airplanes, helicopters, and boats in the harbor, and on Sunday mornings, church bells. The resulting

work, *Inside Out*, emphasizes how much information about our environment comes through the sounds we hear.

A Bell for Every Minute, commissioned by Creative Time, Friends of the High Line, and the New York City Department of Parks and Recreation, is broadcast through speakers installed in the Museum's outdoor Sculpture Garden. Every minute, the sound of a different bell is heard, and on the hour all the bells chime together. Recorded in New York City, the sounds include diner bells, the New York Stock Exchange bell, the United Nation's Peace Bell, bike bells, bells on cat collars, and alarm bells. An accompanying map locates each bell's position within the city. Each bell tone within Vitiello's composition has a clarity that cuts through the blur of urban sound that penetrates the walls of the Museum's garden.

Hong-Kai Wang
Music While We Work. 2011.
Multichannel sound and
2-channel video installation.
Collection the artist

Hong-Kai Wang pursued art
and politics at the National

Taiwan University before receiving an M.A. in Media Studies at the New School in New York. She works with sound as a means of investigating social relationships, seeking ways to explore the construction of social space in everyday life.

Wang made *Music While We Work* for the Taiwan Pavilion at the 54th Venice Biennale. She chose as a collaborator the political activist and composer Chen Bo-Wei, a founding member of Black Hand Nakasi Workers' Band, which since 1996 has been facilitating the active involvement of social minorities in cultural productions and political activism.

Wang assembled a group of retired workers from a sugar refinery in the small industrial town of her childhood, where her own family's life had revolved around the same factory. After attending workshops in listening and recording led by Bo-Wei, the retirees and their spouses—there were nine participants in all, many of them friends—returned to the factory to document the sounds of the environment they knew so well. Wang asked them to "paint a world composed by your listening," and together

they created a soundscape of a very particular place, with its own particular language. The editing, like the recording, of the sound was a collective effort by the workers, assisted by the artist. The sound is paired with video in a work that is a tribute to its makers' intelligence, sensitivity, and human warmth and a record of a certain way of life, and of acquired skills, that are fast disappearing.

Jana Winderen

Ultrafield. 2013.

16-channel ambisonic sound installation. Surround sound audio software and installation consultancy by Tony Myatt, Professor of Sound, University of Surrey.

Collection the artist

Jana Winderen studied mathematics, chemistry, and fish ecology in Oslo and went on to graduate in Fine Arts from Goldsmiths, University of London. Describing her work as "blind" field recording, she begins her compositional process in remote locations, where she chooses which sound, creature, or idea to follow, and



Jana Winderen. Untitled performance at SuperDeluxe, Tokyo. 2008

thus lays the foundations for a project.

Winderen uses sensitive microphones to collect sounds that are unfamiliar and sometimes inaudible to the human ear. Using hydrophones, she captures sounds from deep beneath the ocean's surface, then mixes the recordings into layered compositions that she uses in live performances and installations, on CD, cassette and vinyl records, and for film and radio. The results are uncanny sonic evocations of places as difficult for most of us to imagine as a crevasse in an underwater glacier. Revealing the complexity and strangeness of the natural world is central to her practice. Who knew that cod and shrimp use sound to communicate and select a mate, or that ants at work make a tremendous racket?

Recently, Winderen has been recording the sounds of bats in flight. In *Ultrafield*, listeners hear even more than the artist did as she was circled by bats flying among a stand of trees. Imperceptible to her at the time, the bats' ultrasonic echolocation calls have been rendered audible by slowing the recording to one-tenth of its normal speed. These clicking sounds have been combined in *Ultrafield* with the chirping stridulations of underwater insects and sounds made by fish to protect their habitats or to find a mate. The result is a composition echoing the activity of a fragile ecosystem revealed through sound.

through discarded oil drums and box springs and had a cast of performers that included the artists John Driscoll, Phil Edelstein, and Bill Viola, who went on to form the still-active collaborative Composers Inside Electronics.

1 See Anne Hilde Neset's essay on p. 16.
2 Cage's use of electronics began with his *Cartridge Music* (1960), *Music for Amplified Toy Pianos* (1960), *0'00"* (the 1962 companion piece to *4'33"*), and *Electronic Music for Piano* (1964). Tudor's performance installation *Rainforest I* was composed in 1968 for the choreographer Merce Cunningham. The fourth version of the piece, created in 1973, featured an electronic circuit that drove sounds

3 Experimental Intermedia and The Kitchen, in New York City; Fylkingen intermedia society (founded 1933), in Stockholm; Sonic Arts Network, now Sound and Music, in London; E/Static Gallery in Milan; XEBEC in Kobe; and Clifton Hill Community Music Center in Melbourne.

4 Carlos Palombini, "Machine Songs V: Pierre Schaeffer: From Research Into Noises to Experimental Music," *Computer Music Journal*, MIT Press, Vol. 17, No. 3 (Autumn, 1993), pp. 14–19.

5 Since 1963, the DAAD (German Academic Exchange Service) has granted one-year residencies in Berlin to approximately one thousand artists. During René Block's directorship, recipients included sound artists Terry Fox, Arnold Dreyblat, Paul diMarinis, Gordon Monahan, Pauline Oliveros, John Driscoll, Marianne Amacher, David Moss, Shelley Hirsch, Alvin Lucier, and Alvin Curran.

6 *Für Augen und Ohren* established the notion of Klangkunst, which gradually developed as a field with its own theoretical discourse, largely in Germany. Klangkunst was the focus of *Sonambiente: Festival für Hören und Sehen*, an exhibition with film screenings and performances, held at the Akademie der Künste, Berlin, in 1996 and 2006.

7 The exhibition took place at the Royal College of Art, London.

8 Seth Cluett, "Loud Speaker: Towards a Component Theory of Media Sound," Ph.D. diss., Princeton University. (Ann Arbor: ProQuest/UJI, 2013), pp. 122–128.

9 A major figure among the first generation of sound artists, Kubisch (born 1948) trained as a composer before turning towards installation. Her experiments with acoustic space and the dimension of time are especially well known in Europe.

10 Singuhr sound gallery, Berlin, founded 1996 by Carsten Seiffarth; Five Beekman, New York, founded 1996 by Michael Schumacher and Liz Radke, was renamed Diapason in 2001; KHOJ, New Delhi, founded 1997; AVA, New York, founded 2008 by Justin Luke; Issue Project Room, Brooklyn, founded 2003 by Suzanne Fiol; Lydgalleriet (Soundgallery), Bergen, founded 2005, and Sound Fjord, London, founded 2010.

11 Often fully realized only when installed, time-based media works are complex constructions that pose new challenges for their custodians. The installation of these works requires new skills and new networks

of collaboration within museums. Current international standards for the handling, installation, and care of time-based media works can be found at http://www.moma.org/explore/collection/conservation/media_art

12 Seth Kim-Cohen, *In the Blink of an Ear: Toward a Non-Cochlear Sonic Art* (New York: Continuum International Publishing Group, Inc., 2009).

13 The term "phonography" was synonymous with "stenography" long before it was associated with sound recording in the 1990s. <http://www.phonography.org>

14 The exhibition included the work of Connie Beckley, Julia Heyward, and Maggie Payne. It was preceded by "Projects: Laurie Anderson, Handphone Table" in 1978 and was followed by Terry Fox's show *Room Temperature* in 1980.

15 They worked together again on part three of *A Grammar For Listening*, 2009, a film in which Fowler experimented with the relationship between looking and listening.

16 Kirkegaard was inspired by Alvin Lucier's work *I am Sitting in a Room* (1969), in which Lucier recorded himself narrating a text that began "I am sitting in a room, different from the one you are in now. I am recording the sound of my speaking voice..." He played that recording in the room and rerecorded it, repeating the process until his words were unrecognizable, overwhelmed by the ambient tones and harmonies within the room.

EXPRESSWAY TO YR COCHILEA

Anne Hilde Niset

Sound belongs to no single artistic practice. It is taken up and channeled freely in music, theater, film, sculpture, video, installation, performance, and architecture. But there is one artistic practice that often employs these other mediums in the service of sound. How to define this sound-centered art, and how to distinguish it from other practices within the wider auditory culture are subjects of debate. This much is known: sound art embraces science, music, noise, political activism, ecology, anthropology, memory, literature, and more. Not surprisingly, it assumes a myriad of forms presented in a multitude of ways and with countless objectives.

The term “sound art” has become shorthand for the wide array of artistic activity that either employs audio as a main component or silently reflects on sound. The practice emerged in an obscure zone between composed music, installation, performance, and Conceptual art. Over the past two decades, it has found a home in art institutions, where its reception has coincided with “the sonic turn.”¹ This term designates the gradual shift in focus from the visual toward the auditory that has been taking place in art practices and academic studies at a time when the mainlining of sound from personal devices into ears and brains via headphones has become a global phenomenon.

Marcel Duchamp contributed as much as any composer, scientist, or inventor to this

shift. His Readymades, mundane objects that he presented as art, anticipated and to some degree paved the way for the introduction of sound art within the precincts of museums, where sounds, like objects, are now displayed, thought about, and looked upon. The path has not been without obstacles. Although contemporary art venues have become presenters of sound art, their pristine, white-cube exhibition spaces can be far from ideal for the purpose of containing and carrying sound. Sound bounces restlessly off gallery walls, causing reverberation, sound bleed, and cacophony in spaces built for maximum contemplation and minimum distraction.

Traditional concert halls, despite superior acoustics, are equally ill adapted for sonic experimentation. Their fixed seating and elevated stages render them unsuitable for presenting not only sound as an art form but also innovative forms of new music that place performers and audiences in new roles and relationships.² As I will explore below, composers have been challenging 19th-century musical conventions, including concert protocol, since the end of World War II (and in some cases, even earlier), but few architects have been listening. Half a century after the Philips Pavilion at the 1958 Brussels World’s Fair attracted thousands of visitors to Iannis Xenakis’s visionary project exploring the spatialization of sound, traditional, large-scale, fixed-seat halls

are still the norm. Thus, sonic experimentation has gravitated to the more flexible quarters of museums, galleries and artist-run spaces, as well as to clubs and ad hoc performance venues such as parking garages and industrial buildings.³

In his 1999 work *Time Line*, Christian Marclay points to the exclusion of sonic history from the mainstream history of art, and indirectly to the chasm between the worlds of music and art—worlds composed of separate audiences, distinct networks of distribution and critique, and widely diverging economic scales. Writing with felt tip pen on a found, printed timeline of painters, sculptors and architects who lived between 1780 and 1960, Marclay inserted the dates of birth and death of John Coltrane, Pierre Henry, Mauricio Kagel, Gordon Mumma and thirty-six other pathbreaking musicians, including Mozart and Beethoven, crowbarring a history of music into the continuum of visual and spatial arts. A continuum, but

one in which painting, sculpture, and architecture were seen as separate and distinct: on the timeline Marclay found, each of the three disciplines was assigned its own horizontal block. Had the timeline gone beyond 1960, these categorical divisions would have been unworkable—unable to account for the increasing hybridity in the arts, and for the emergence of video, experimental film, performance, and sound art.

At what point sound art slots into a general art history is still an open question. During the late 1950s and 1960s, art’s focus began to shift from the strictly visual toward the multisensory, as witnessed by works such as Yves Klein’s *Anthropométries* series, which combined live performance, painting, and music, and Carolee Schneemann’s live action *Glass Environment for Sound and Motion*, featuring musicians and dancers. Robert Rauschenberg’s combine painting *Broadcast* (1959) and Robert Morris’s *Box with the Sound of Its Own Making* (1961) were prefigurations of sound art, and in 1966, Ralph T. Coe organized perhaps the earliest example of a sound art show: *Sound, Light, Silence: Art that Performs at the Nelson Gallery–Atkins Museum* (now the Nelson–Atkins Museum of Art) in Kansas City, Missouri.⁴ Although sound art garnered curators’ attention early on in the development of cross-media art, only in the past twenty years has it become the subject of serious critical and art historical interest and investigation in its own right.



Office of Le Corbusier. The Philips Pavilion. Brussels World’s Fair, 1958



Yves Klein. *Anthropométries*. 1960

Sonic experimentation has been marginalized by music history, too, with the consequence that key contributors to the field remain relatively little known. Pierre Schaeffer, for example, a major figure who conceptualized and manipulated sound as an object from the late 1940s to the end of the 1960s, and to whom we shall return, has been celebrated in his native France for his role in developing *musique concrète* (concrete music) but is mentioned only fleetingly in mainstream music histories. It has taken sixty years for his most significant written work, *À la recherche d'une musique concrète* (In Search of a Concrete Music), to appear in English translation.⁵

Histories of sound art and the theories that are developing from them are helping to spread awareness of the work of visionaries such as Schaeffer and also of pioneering women artists and composers who have been written out of music histories. Michael Nyman's 1974 book *Experimental Music: Cage and Beyond* (*Music in the Twentieth Century*), which was, and for some still is, a standard text on the genre, comments on barely a handful of female practitioners: Charlotte

Moorman is credited only for her most famous role as Nam June Paik's chief interpreter and muse, and Pauline Oliveros and Meredith Monk get but a stingy acknowledgment—they're both included in the same sentence—in the introduction.⁶ Over the past few decades the prominence of women in the visual arts has grown enormously, in contrast with the representation (and acknowledgment) of women in music composition and improvisation.

Harmony of the world: sound and mathematics

"Musike is a Mathematicall Science, which teacheth, by sense and reason, perfectly to judge, and order the diversities of soundes hie and low," wrote the polymath astronomer and occultist John Dee in 1570.⁷ Long before Dee, music had been regarded as a mathematical science, alongside arithmetic, geometry, and astronomy. The ancient Greek philosopher Pythagoras is said to have discovered that a musical string's pitch is diametrically proportionate to its length, and that when a string's vibration

doubles in speed, its pitch doubles in height. From this finding, Pythagoras deduced simple ratios to determine the octave, which, 2,500 years later, still forms the basis of the Western tempered scale. He believed that tones could create perfect harmonies, and that music could heal the body and elevate the soul. He also believed that the planets, through their motions, composed a perfect celestial symphony. Although music made on earth was a means for communicating with the gods and expressing mathematical truths, in the minds of Pythagoras and his followers, it was but a faint echo of what they called the Music of the Spheres.

The Pythagorean notion of celestial harmony was given a scientifically enhanced boost in the 17th century by the astronomer Johannes Kepler⁸ and has filtered down to the present day as a metaphor for music that expresses natural and physical laws rather than human feelings. Understood this way, it has entered the bloodstream of modern composition, from the serialism of Arnold Schoenberg and the Second Viennese School through spectralism and beyond to Karlheinz Stockhausen's cosmically charged works, Iannis Xenakis's spatial and geometric investigations, right up to fractal music, digital composition and self-generating musical systems of artists such as Farmers Manual and Brian Eno.

Physical laws are harnessed to run the show in *Wellenwanne Ifo*, Carsten Nicolai's installation in *Soundings*. In the piece, inaudible soundwaves cause ripples to form on the surface of water. Seen up close, the water's surface might be thought to resemble a dance floor heaving with bodies wriggling in unison to the subharmonic frequencies.

Nicolai, who is also a producer of electronic music (Alva Noto is his stage name),

directly cites scientific ideas and discoveries in his work as an installation artist employing sound and light. Behind his interest in natural symmetry lies a deep romantic impulse. For Nicolai, romanticism chimes perfectly with a committed engagement to science and digital culture.

In search of a concrete music

Pierre Schaeffer and Maryanne Amacher stand out as central to the development of sound art. Schaeffer, a composer and founder of the GRM (Groupe de Recherche Musicale), was famous in France as a cultural commentator on radio and TV, and as the author of works that reveal him to have been a utopian thinker of equal stature to his near contemporaries Marshall McLuhan, Le Corbusier, and Buckminster Fuller.⁹

His greatest achievement, in 1948, revolutionized the sonic landscape. Describing his preparations, he wrote:

1948. March. Back in Paris. I have started to collect objects. I have a "symphony of noises" in mind, after all, there has been a symphony of psalms. I go to the sound effects department of the French radio service. I find clappers, coconut shells, klaxons, bicycle horns. I imagine a scale of bicycle horns. There are gongs and birdcalls I take away doorbells, a set of bells, an alarm clock, two rattles, two childishly painted whirligigs. The clerk causes some difficulties. Usually, he is asked for one particular item. There are no sound effects without a text in parallel, are there? But what about the person who wants noise without text or context?¹⁰

Noise, as opposed to musical sound made by instruments, had barged into the cultural consciousness as a form of art early in the century, with Futurist Luigi Russolo's 1913 manifesto *The Art of Noise*¹¹ and the performance of his cacophonous *Gran Concerto Futuristico* in 1917. Edgard Varèse, in a lecture of 1936, envisaged new instruments to make colliding sound masses,¹² and a year later John Cage extolled the value of non-musical sound in his celebrated *Future of Music: Credo*.¹³ Schaeffer might be said to have completed these composers' work of expanding the field of music to include all sounds as he pried open a portal to a new musical and aural universe.

From the motley collection of objects that he borrowed from his employer, Schaeffer recorded sounds onto dubplate vinyl records. He played the records backwards, experimented with the rotation speed and used the results as a basis of composition. His breakthrough *Concert de Bruits*, constructed and broadcast that same year, represents a turning point in music history. The piece did away with the player-composer relationship and placed the focus on the music producer, the manipulator of the sound matter itself, like the electronic musician of today.



Pierre Schaeffer. Sound experiment. Paris, 1955

"I expected complaints," Schaeffer wrote in his diary after the broadcast. "I rather dreaded scandal. Twelve letters arrived, friendly and enlightened."¹⁴ Written mainly by fellow composers and film directors, the letters expressed an understanding of Schaeffer's aim of decontextualizing sounds, but some asked for a clarification. By way of reply, Schaeffer sketched out the differences between abstract and concrete music in a special edition of the journal *Polyphonie*.¹⁵ He explained that abstract music is conceived in the mind, whereas concrete music is made up of preexisting sound elements that are composed experimentally, by means of direct montage. The term "experimental music" has been rendered almost meaningless by years of overuse, but Schaeffer's method was truly experimental. Put together in a laboratory-like studio, his pieces are as much practical investigations of sound as they are artistic compositions.

Schaeffer's compositional methods are recalled in *Before Me*, Richard Gare's piece in *Soundings*, in which a glass marble, like one of Schaeffer's sonic props, repeatedly advances only to slide back audibly, with its sound amplified, to its starting point on a record player's overturned revolving platter. Also descended from Schaeffer, Haroon Mirza's carefully composed sculptures, which combine analogue and digital objects such as radios and TVs with pieces of junk and furniture, unite disparate objects into often bewildering pieces that seem to reunite sounds with the objects that produced them. Mirza, a former DJ, composes his pieces as much for their sonic as for their visual impact. His work has been described as "the materialisation of early House music's innards, as if 'automatic'



Carolee Schneemann. *Glass Environment for Sound and Motion*, 1962. Performance at the Living Theater, New York, 1962. From left: Malcolm Goldstein, Yvonne Rainer, Andre Cadot

tracks like *Washing Machine* by Mr Fingers or *Phone Systems* by Ricky Smith had been generated involuntarily by self-replicating systems in a Chicago foreclosure warehouse."¹⁶

Schaeffer paved the way for the sound revolution that was brought about by tape manipulation, electronic instruments, and digital technology, and introduced acousmatic listening—listening to sounds whose origins are unseen—into the realm of art. Amacher proposed another new model of listening. She dreamed of miniature speakers the size of grains of sand that could be tossed into the air, and of using buildings or entire cities as giant resonating chambers for her compositions. She experimented with sound perception (psychoacoustics), and aspired to compose using what she called structure-bound sound—sonic vibration carried by concrete materials—rather than airborne sound issued by speakers. Otoacoustic emissions—sonic vibration produced by the inner ear itself—played an important role in her compositions. Florian Hecker is one of the many artists who, deeply

inspired by Amacher, continues to work in psychoacoustics and develop immersive sonic environments that take you—to paraphrase Sonic Youth—on an expressway to your inner ear.

Earth's own instrument

"Sound is the vocabulary of nature," Schaeffer said in 1986, in one of his last interviews. "When we hear the wind, the wind says 'I'm blowing.' When we hear water, the water says 'I'm running.'" ¹⁷ Composer and theorist R. Murray Schafer considers the earth's own sounds to be a macrocosmic composition unfolding in real time that "deserves to be listened to as attentively as a Mozart symphony."¹⁸ Looking back to ancient Greece, he has divided music into two categories:



Pauline Oliveros. Performance at The Ijsbreker, Amsterdam, 1999



Meredith Monk. "Bird Code" from *Songs from the Hill*. Performance in Florence, Italy, 1995

that which possesses "secret unitary properties,"¹⁹ such as Pythagoras's Music of the Spheres, and that which is perceived to emanate from "subjective emotion breaking forth from the human breast."¹⁹ According to Schafer, music as a form of personal expression belongs to the romantic art of the virtuoso that has dominated for centuries.

Schafer coined the term "soundscape" in the late 1960s to describe our auditory surroundings and subsequently initiated the study of acoustic ecology to explore ways of protecting the aural environment. Emily Thompson elaborates on the definition of soundscape in the introduction to her book *The Soundscape of Modernity*: "...a soundscape is simultaneously a physical environment and a way of perceiving that environment; it is both a world and a culture constructed to make sense of that world.... A soundscape's cultural aspects incorporate scientific and aesthetic ways of listening, a listener's relationship to their environment, and the social circumstances that dictate who gets to hear what."²¹

Environmental sounds are used abundantly in sound art as well as in music. The term "field recording," formerly employed to refer to the anthropological documentation of indigenous rituals and musics, now encompasses all environmental recordings, which have proliferated in music and sound art in the last fifteen

years. Phonography is another name for this documentary strand of audio recording that, only once recorded sound had been recognized as a malleable artistic material, could itself be recognized as an art form.

Jana Winderen records sounds of the natural world that are unavailable to the naked human ear. She has buried microphones in ants' nests, lowered hydrophones deep into the ocean, and registered the echolocation clicks used by bats for navigation. An incalculable amount of communication goes on around us, beyond our auditory capacity, and Winderen channels these sonic impulses in her installations. Her concern for environmental protection overlaps with Schafer's for the preservation of sound environments. If we lose a species, we lose a sound.

Who records, who is recorded, who interprets, and who listens are questions posed in *Music While We Work*, by Hong-Kai Wang. Wang explores the political dimension of environmental sound and the power relationships involved in recording it. In her work for *Soundings*, she handed over her recording equipment to former employees in a sugar refinery, so that together they could create the soundtrack of their working lives.

Sensory expansion

The notion that all sounds that have ever occurred are still vibrating, however faintly, somewhere in the universe prompted the historian Bruce R. Smith to investigate the sounds of the 16th and 17th centuries in his book *The Acoustic World of Early Modern England*.²² Analyzing the descriptions of sounds that he found in plays, diaries, and books produced during that period, Smith has come up with a fascinating sonic

portrait of the time. London, for example, was considered a particularly cacophonous place, where youths competed each afternoon to see who could ring the churchbells the loudest. The continuous clanging led one visitor to conclude that Londoners must have been "vastly fond of great noises that fill the air."²³

Scholarly works on sound and acoustics have proliferated in recent years. This burgeoning cross-disciplinary field of auditory culture studies has developed at the interface of hearing sciences, musicology, ethnomusicology and anthropology, philosophy, critical theory, sociology and psychology, listening practices, and sound art. To say the least, this abundance of scholarship reflects an increasing awareness that sounds and the way we listen to and hear them are fundamental to our understanding of the world. Like sound art, it is part of the sonic turn reflected in this exhibition.

- 1 Jim Drobnick, *Aural Cultures* (Toronto: YYZ Books, 2004), p. 10. The formulation "sonic turn" is derived from the title of W.J.T. Mitchell's essay "The Pictorial Turn," *Artforum*, March 1992, p. 89 ff. Mitchell's title echoed the title of Richard Rorty's *The Linguistic Turn* (Chicago: University of Chicago Press, 1967).
- 2 Fixed seating and permanent stages are especially inappropriate for multichannel and electronic/electroacoustic music designed for ambulant audiences. For example, an audience of two thousand people at a sold-out concert of electroacoustic works by Karlheinz Stockhausen at London's Barbican Center in October 2001, listened while gazing at an empty stage from their fixed, forward-facing seats. Sound artist Fransico Lopez chooses to conduct his concerts with blindfolds to eliminate visual distraction.
- 3 London's Tate Modern recently opened Tate Tanks, a space intended mainly for sound and performance.
- 4 Documented in Seth Cluett, "Loud Speaker: Towards a Component Theory of Media Sound"; PhD diss., Princeton University. (Ann Arbor: ProQuest/UJI, 2013).

- 5 Pierre Schaeffer, *In Search of a Concrete Music*, trans. John Dack and Christine North (Berkeley: University of California Press, 2012), p. 4. Originally published as *À la recherche d'une musique concrète* (Paris: Éditions du Seuil, 1952).
- 6 Michael Nyman, *Experimental Music: Cage and Beyond (Music in the Twentieth Century)* (Cambridge: Cambridge University Press, 1999), p. xviii.
- 7 John Dee, "The Mathematicall Praeface to the Elements of Geometrie of Euclid of Megara," [1570] reprinted in *Music and Mathematics: From Pythagoras to Fractals*, eds. John Fauvel, Raymond Flood, Robin Wilson (Oxford: Oxford University Press 2003), p. 1.
- 8 Johannes Kepler, *The Harmony of the World*, [1619], trans. E. J. Aiton, Alistair M. Duncan, Judith V. Field (Philadelphia: American Philosophical Society, 1997).
- 9 Rob Young, "Pierre Schaeffer and the Birth of *Musique Concrète*," *Frieze*, 152, Jan.–Feb. 2013, p. 32.
- 10 Pierre Schaeffer, *In Search of a Concrete Music*, p. 22.
- 11 Russolo wrote *L'arte dei Rumori* as a letter to his friend Francesco Balilla Pratella in 1913. It was first published in English as *The Art of Noise*, trans. Robert Filliou (New York: Something Else Press, 1967).
- 12 Edgard Varèse and Chou Wen-chung, ed., *The Liberation of Sound*, originally published in *Perspectives of New Music*, vol. 5, no. 1 (Autumn–Winter, 1966), pp. 11–19.
- 13 John Cage, *Silence: Lectures and Writings* (London: Marion Boyars, 1978/2004).
- 14 *In Search of a Concrete Music*, p. 22.
- 15 Pierre Schaeffer, "Introduction à la musique concrète," *Polyphonie*, cahier no. 6, 1950, pp. 30–52.
- 16 David Toop, "Cross Platform," *The Wire*, March 2012, p. 22.
- 17 Tim Hodgkinson, "Interview with Pierre Schaeffer," *ReR Quarterly*, 2, 1, 1987. See www.timhodgkinson.co.uk/schaeffer.pdf
- 18 R. Murray Schafer, *The Music of the Environment* (Vienna: 1973), reprinted in *Audio Culture*, eds. Christoph Cox and Daniel Warner (London and New York: Continuum, 2004), p. 30.
- 19 Ibid.
- 20 Ibid.
- 21 Emily Thompson, *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933* (Cambridge, Mass.: MIT Press, 2004), p. 12.
- 22 Bruce R. Smith, *The Acoustic World of Early Modern England* (Chicago: University of Chicago Press, 1999).
- 23 Ibid., p. 52–53.